UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/459,380	12/13/1999	PETER ALLEN HUBOI	03384.0346-0	1069

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STORM, DONALD L

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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	09/459,380	HUBOI, PETER ALLEN
	Examiner	Art Unit	
	Donald L. Storm	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _July 25, 2005 through January 3, 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-54_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-54_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _13 December 1999_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Prosecution Application

1.   The DECISION ON PETITION TO WITHDRAW HOLDING OF ABANDONMENT, mailed March 4, 2004, withdrew the holding of abandonment and vacated the Notice of Abandonment. Pursuant thereto, the request filed on June 19, 2003 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application 09/459,380 is acceptable. A CPA has been established.

2.   The CPA fee having been timely paid on January 3, 2007, an action on the merits follows. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

3.   Claims 1-54 are pending in the application. Claims 1, 3-8, 10, 12-15, 17, 21, 23, 26-28, 30, 32, 37, 39, 41, 44, and 47-54 were amended in AMENDMENT AND RESPONSE TO OFFICE ACTION, filed February 25, 2003 (paper 4) in response to a previous Office action. Although claim 19 and claim 42 have status indicators of currently amended, the Examiner could not find amended matter in those claims.

Claim Informalities

4.   Claim 10, and by dependency claims 11-16, are objected to under 37 CFR 1.75(a) because the meaning of the phrase "storing one or voice representations" (line 3) needs clarification. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phase to be -- storing one or more voice representations--.

5.   Claim 10, and by dependency claims 11-16, are objected to under 37 CFR 1.75(a) because the meaning of the phrase "the voice message" needs clarification. Because no voice message was previously recited, it is unclear as to what element this phrase is making reference. To further timely prosecution and evaluate prior art, the Examiner has interpreted the voice message to be the received voice information.

6.   Claim 23, and by dependency claims 24-29 are objected to under 37 CFR 1.75(a) because the meaning of the phrase "the voice message" needs clarification. Because no voice message was previously recited, it is unclear as to what element this phrase is making reference. To further timely prosecution and evaluate prior art, the Examiner has interpreted the voice message to be the received voice information.

7.   Claim 37, and by dependency claims 38-40 are objected to under 37 CFR 1.75(a) because the meaning of the phrase "the voice message" needs clarification at least for its first appearance. Because no voice message was previously recited, it is unclear as to what element this phrase is making reference. To further timely prosecution and evaluate prior art, the Examiner has interpreted the voice message to be the received voice information.

8.   Claim 44, and by dependency claims 45-46, are objected to for the same reasons as claim 37 because the limitations are recited using obviously similar phrases.

9.   Claim 48 is objected to for the same reasons as claim 23 because the limitations are recited using obviously similar phrases.

10.   Claim 50 is objected to for the same reasons as claim 37 because the limitations are recited using obviously similar phrases.

11.   Claim 52 is objected to for the same reasons as claim 37 because the limitations are recited using obviously similar phrases.

12.   Claim 54 is objected to for the same reasons as claim 37 because the limitations are recited using obviously similar phrases.

13.   The Examiner notes, without objection, the possibility of informalities in the claims. The Applicant may wish to consider changes during normal review and revision of the disclosure.

In claim 14, line 2, should the word "ore" be --or--?

Claim Rejections - 35 USC § 102

McDonough

14.   Claims 1, 4-5, 8-10, 13-17, 22-23, 28-29, 47, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonough et al. [US Patent 5,625,748], already of record.

15.   Regarding claim 1, McDonough describes the claimed limitations as a whole recognizable to one versed in the art as the embodiment for processing untranscribed speech by describing the content and functionality of the recited limitations recognizable as a whole to one versed in the art. McDonough uses terminology as described the previous Office action (mailed November 20, 2002 as paper 3) at numbered section 7, and reproduced here:

voice representations and voice messages [at column 6, lines 23-29, as untranscribed speech data];

storing voice, corresponding to a word or phrase [at column 2, lines 1-17, as training words to the vocabulary];

storing actions [at column 2, lines 14-17, as create a new node associating an action with a word];

receive a voice message [at column 1, lines 53-54, as provide an input speech message];

analyze the voice message to determine if a stored voice representation occurs in the message [at column 5, lines 43-50, as process a spoken message to produce a signal for the potential speech events in the spoken data];

perform actions if the stored voice representations are found in the voice message [at column 2, lines 1-8, as route the message according to the action associated with the word].

McDonough also describes:

each voice representation is associated with a score [at column 6, lines 41-42, as parameter values for individual event distributions];

generate a total score associated with the voice message [at column 7, lines 28-44, as summing confidence scores over the speech data];

performing the (stored) action based on the total score [at column 12, lines 28-41, as sort, classify or route based on the topic, wherein at column 5, line 64-column 6, line 1 the topic choice is a confidence score that a topic is present].

16.   Claim 4 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 4 is set forth including the limitations of claim 1. McDonough describes those limitations as indicated there. McDonough also describes additional limitations as follows:

the user specifying words or phrases [at column 12, lines 11-13, as keywords selected by an operator];

storing a voice representation of each user specified word or phrase [at column 2, lines 1-17, as training words to the vocabulary];

the user specified words or phrases are included in analyzing the voice message [at column 12, lines 1-27, as keywords selected by the user are modeled in the event detector].

17.   Claim 5 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 5 is set forth including the limitations of claim 1. McDonough describes those limitations as indicated there. McDonough also describes additional limitations as follows:

the user specifying actions to be performed if the voice representation is found in the voice message [at column 2, lines 1-24, as the user specifies the correctness of the action associated with the word to route the message according to the action associated with the word];

storing the user specified actions [at column 2, lines 1-24, as the user specifies the correctness of the action to create a new node associating an action with a word];

the user specified actions are included in performing the stored actions [at column 2, lines 1-24, as route the message according to the action associated with the word for which the user specifies the correctness of the action associated with the word].

18.   Claim 8 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 8 is set forth including the limitations of claim 1. McDonough describes and make obvious those limitations as indicated there. Because McDonough's embodiments are directed equally to either processing of phone calls or processing of stored messages, McDonough describes:

forwarding the voice message [at column 12, lines 36-41, as routing a phone call based on the message, where the message is forwarded in the embodiment processing a stored message].

19.   Claim 9 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 9 is set forth including the limitations of claim 1. McDonough describes and make obvious those limitations as indicated there. Because McDonough's embodiments are directed equally to either processing of phone calls or processing of stored messages, McDonough describes:

the voice message is received over a telephone line [at column 2, line 19, as speech over the telephone].

20.   Regarding claim 10, McDonough describes the claimed limitations as a whole recognizable to one versed in the art as the embodiment for processing untranscribed speech by describing the content and functionality of the recited limitations recognizable as a whole to one versed in the art. McDonough uses terminology as described the previous Office action (mailed November 20, 2002 as paper 3) at numbered section 12, and reproduced here:

voice representations and voice information from a person [at column 6, lines 23-29, as untranscribed speech data, where at column 2, lines 25-26, the user speaks naturally];

storing voice, corresponding to a word or phrase [at column 2, lines 1-17, as training words to the vocabulary];

storing actions [at column 2, lines 14-17, as create a new node associating an action with a word];

receive voice information from a person over a communications line [at column 2, lines 18-19, as conversational speech over the telephone];

analyze the voice information from the person to determine if a stored voice representation occurs in the voice information [at column 12, lines 28-41, as sort speech data from phone calls or incoming voice messages for automatic detection of speech data of interest];

perform actions if the voice information includes a stored voice representation [at column 12, lines 28-41, as respond to, route, or classify the phone call or incoming voice message using the sorting for detection of speech data of interest].

McDonough also describes:

a word or phrase is associated with a score [at column 6, lines 41-42, as parameter values for individual event distributions];

generate a total score associated with the voice message [at column 7, lines 28-44, as summing confidence scores over the speech data];

performing the stored action based on the total score [at column 12, lines 28-41, as sort, classify or route based on the topic, wherein at column 5, line 64-column 6, line 1 the topic choice is a confidence score that a topic is present].

21.   Claim 13 is set forth including the limitations of claim 10 and with additional limitations similar to limitations set forth in claim 4. McDonough describes the limitations as indicated there.

22.   Claim 14 is set forth including the limitations of claim 10 and with additional limitations similar to limitations set forth in claim 5. McDonough describes the limitations as indicated there.

23.   Claim 15 is set forth including the limitations of claim 10. McDonough describes those limitations as indicated there. McDonough also describes additional limitations as follows:

receiving voice information during a call [at column 12, lines 37-38, as spoken message by a phone call from a caller];

compiling statistics on the call [at column 7, lines 46-47, as compute the scoring statistic given the data in the message].

24.   Claim 16 is set forth including the limitations of claim 10 and with additional limitations already described there.

25.   Claims 17 and 22 are set forth with limitations similar to claims 1 and 9. McDonough describes the limitations as indicated there. McDonough also describes additional limitations as follows:

a storage device for storing the parameters associated with the claimed functionality [at column 12, line 2, as the internal structure of the event detector, for the example at column 2, lines 1-9, the word nodes and action nodes];

a processor for accomplishing the claimed functionality [at column 5, lines 45-46, as a speech event frequency detector].

26.   Claims 23, 28, and 29 are set forth with limitations similar to claims 10, 15, and 9. McDonough describes the limitations as indicated there. McDonough also describes additional limitations as follows:

a storage device for storing the parameters associated with the claimed functionality [at column 12, line 2, as the internal structure of the event detector, for the example at column 2, lines 1-9, the word nodes and action nodes];

a processor for accomplishing the claimed functionality [at column 5, lines 45-46, as a speech event frequency detector].

27.   Claim 47 is set forth with limitations similar to limitations set forth in claim 17. McDonough describes the limitations as indicated there, where the storage device and the processor are the means for storing, means for receiving, and means for analyzing.

28.   Claim 48 is set forth with limitations similar to limitations set forth in claim 23.

McDonough describes the limitations as indicated there, where the storage device and the

processor are the means for storing, means for receiving, and means for analyzing.

Claim Rejections - 35 USC § 103

McDonough and Furui

29.   Claims 2, 11, 18, 24, 30, 32, 35-37, 39-41, 43-46, and 49-50 are rejected under 35

U.S.C. 103(a) as being unpatentable over McDonough et al. [US Patent 5,625,748] in view of

Sadaoki Furui, "Digital Speech Processing, Synthesis, and Recognition," Marcel Dekker, Inc.,

New York, 1989, pp. 225-289, both already of record.

30.   Claim 2 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3), and reproduced here:

Claim 2 is set forth including the limitations of claim 1. McDonough describes those

limitations as indicated there. McDonough [at column 7, lines 26-48] also describes phonetic

wordspotting for the preferred embodiments.

Furui describes:

a voice message [at page 226, lines 19-22, as speech waveforms];

each stored voice representation is a phoneme representation of a word or phrase [at page

244, lines 1-4, as reference templates use phonemes concatenates to represent words].

Although, McDonough describes phonetic wordspotting, McDonough does not explicitly

describe phoneme models.

To the extent that McDonough's stored voice representations of words are not necessarily

phoneme representations, it would have been obvious to one of ordinary skill in the art of speech

recognition at the time of invention to include Furui's phoneme based lexicon for wordspotting as

McDonough's trained vocabulary, because McDonough points out phonetic wordspotting as preferred.

31.   Claim 11 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 11 is set forth including the limitations of claim 10 and with additional limitations similar to limitations set forth in claim 2. McDonough and Furui describe and make obvious the limitations as indicated there.

32.   Claim 18 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 18 is set forth including the limitations of claim 17 and with additional limitations similar to limitations set forth in claim 2. McDonough and Furui describe and make obvious the limitations as indicated there.

33.   Claim 24 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 24 is set forth including the limitations of claim 23 and with additional limitations similar to limitations set forth in claim 2. McDonough and Furui describe and make obvious the limitations as indicated there.

34.   Regarding claim 30, McDonough describes the claimed limitations as a whole recognizable to one versed in the art as the embodiment for processing untranscribed speech comprising:

storing actions [at column 2, lines 14-17, as create a new node associating an action with a word];

receive a voice message [at column 1, lines 53-54, as provide an input speech message];

speech [at column 6, lines 23-29, as untranscribed speech data];

predetermined patterns of speech [at column 7, lines 27-37, as HMMs from training and

modeling];

analyze the voice message to determine if it exhibits a predetermined pattern of speech [at

column 5, lines 43-50, as process a spoken message to produce a signal for the potential speech

events in the spoken data];

perform actions if the predetermined pattern is found in the voice message [at column 2,

lines 1-8, as route the message according to the action associated with the word].

Although, McDonough [at column 7, lines 27-44] describes spotting the words and phrases

of the speech data using phonetically trained HMMs for the preferred embodiments, McDonough

presents using HMMs for this method as known techniques. Consequently , McDonough does

describe details of the techniques. In particular, McDonough does not explicitly describe HMMs

representing either a tone of speech or a frequency of speech.

Furui [at page 255, lines 29-38 & page 258, lines 16-18] describes widely investigated

word modeling by phonetic HMMS and that feature vectors are applied in HMMs. Furui

describes:

the predetermined pattern representing a tone of speech in the voice message [at page 8,

lines 1-15 and Fig. 8.15, as a lattice taking account of allophones, coarticulation, stress, and

syllables];

the predetermined pattern representing a frequency of the speech in the voice message [at

page 278, lines 3-9, as Markov models for recognition of input speech converted into spectral

feature vectors by DFT].

To the extent that McDonough's stored voice representations of phonemes, words, and

phrases do not innately represent frequency (or tone), it would have been obvious to one of

ordinary skill in the art of speech recognition at the time of invention that Furui's DFT produces

frequency spectral parameters to represent the HMMs suitable for implementing McDonough's HMMs for word and phrase spotting, because McDonough points out HMMs as preferred.

35.   Claim 32 is set forth including the limitations of claim 30 and with additional limitations similar to limitations set forth in claim 5. McDonough and Furui describe and make obvious the limitations as indicated there.

36.   Claim 35 is set forth including the limitations of claim 30 and with additional limitations similar to limitations set forth in claim 8. McDonough and Furui describe and make obvious the limitations as indicated there.

37.   Claim 36 is set forth including the limitations of claim 30 and with additional limitations similar to limitations set forth in claim 9. McDonough and Furui describe and make obvious the limitations as indicated there.

38.   Claim 37 and claims 39 and 40 are set forth with limitations similar to claim 30 and with limitations similar to limitations set forth in claims 14 and 16. McDonough describes the limitations as indicated there, where a stored voice representation is a predetermined pattern of speech.

39.   Claim 41 and claim 43 are set forth with limitations similar to limitations set forth in claim 30 and claim 22. McDonough describes the limitations as indicated there. McDonough also describes additional limitations as follows:

        a storage device for storing the information associated with the claimed functionality [at column 12, line 2, as the internal structure of the event detector, for the example at column 2, lines 1-9, the word nodes and action nodes];

a processor for accomplishing the claimed functionality [at column 5, lines 45-46, as a

speech event frequency detector].

40.   Claim 44 and claim 46 are set forth with limitations similar to limitations set forth in claim

37 and claim 22. McDonough describes the limitations as indicated there. McDonough also

describes additional limitations as follows: .

a storage device for storing the information associated with the claimed functionality [at

column 12, line 2, as the internal structure of the event detector, for the example at column 2, lines

1-9, the word nodes and action nodes];

a processor for accomplishing the claimed functionality [at column 5, lines 45-46, as a

speech event frequency detector].

41.   Claim 49 is set forth with limitations similar to limitations set forth in claims 30 and 47.

McDonough and Furui describe and make obvious the limitations as indicated there.

42.   Claim 50 is set forth with limitations similar to limitations set forth in claims 37 and 48.

McDonough and Furui describe and make obvious the limitations as indicated there.

McDonough and Epstein

43.   Claims 6-7, 20-21, 26-27, and 51-52 are rejected under 35 U.S.C. 103(a) as being

unpatentable over McDonough et al. [US Patent 5,625,748] in view of Epstein et al. [US Patent

6,327,343], both already of record.

44.   Claim 6 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3) , and reproduced here:

Claim 6 is set forth including the limitations of claim 1. McDonough describes and make obvious those limitations as indicated there. McDonough [at column 12, lines 40-41] also describes classifying stored voice messages.

McDonough, however, does not explicitly describe classifying the message as urgent.

Epstein [at column 8, lines 23-34] also describes processing a voice message as the embodiment for stored audio data. Epstein describes:

marking the message as urgent [at column 17, line 40, as adding an urgency stamp].

Although McDonough describes classifying message, McDonough's does not enumerate any particular classifications. In view of Epstein's labeling a message as urgent, it would have been obvious to one of ordinary skill in the art of message handling at the time of invention to include Epstein's concept of marking as urgent as a classification for McDonough's messages because that would have enabled signaling the addressee that an urgent message is available.

45.   Claim 7 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3) , and reproduced here:

Claim 7 is set forth including the limitations of claim 1. McDonough describes and make obvious those limitations as indicated there. McDonough [at column 12, lines 36-41] also describes routing a phone call based on the message.

McDonough, however, does not explicitly describe calling a pager.

Epstein [at column 8, lines 23-34] also describes processing a voice message as the embodiment for stored audio data. Epstein describes:

calling a pager [at column 4, lines 1-3, as transmit a message to the user's pager].

Although McDonough describes routing calls and messages, McDonough does not enumerate any particular terminal type for receiving the message. In view of Epstein's transmission to a pager, it would have been obvious to one of ordinary skill in the art of message handling at the time of invention to include Epstein's ability to call a pager for McDonough's

messages because that would have enabled signaling the addressee when the user is not at home or

is out of the office, as Epstein describes [at column 14, lines 47-48].

46.   Claim 20 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3) , and reproduced here:

Claim 20 is set forth including the limitations of claim 17 and with additional limitations

similar to limitations set forth in claim 4. McDonough describes the limitations as indicated there.

McDonough [at column 2, lines 17-28] receives input from the user for establishing user selection

of words and actions.

McDonough, however, does not explicitly describe an interface between the user and the

speech event frequency detector.

Epstein [at column 8, lines 23-34] also describes processing a voice message as the

embodiment for stored audio data. Epstein also describes:

a user interface [at column 6, lines 7-13, as a programming interface].

Although McDonough describes receiving input from the user, McDonough does not

explicitly describe any means to accept this input. Because McDonough describes user input, it

would have been obvious to one of ordinary skill in the art of processing devices at the time of

invention to include Epstein's concept of a programming interface with McDonough because that

would provide the means for the user to provide the input to train McDonough's neural network to

the words and actions.

47.   Claim 21 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3) , and reproduced here:

Claim 21 is set forth including the limitations of claim 17 and with additional limitations

similar to limitations set forth in claim 5. McDonough describes the limitations as indicated there.

McDonough [at column 2, lines 17-28] receives input from the user for establishing user selection of words and actions.

McDonough, however, does not explicitly describe an interface between the user and the speech event frequency detector.

Epstein [at column 8, lines 23-34] also describes processing a voice message as the embodiment for stored audio data. Epstein also describes:

a user interface [at column 6, lines 7-13, as a programming interface].

Although McDonough describes receiving input from the user, McDonough does not explicitly describe any means to accept this input. Because McDonough describes user input, it would have been obvious to one of ordinary skill in the art of processing devices at the time of invention to include Epstein's concept of a programming interface with McDonough because that would provide the means for the user to provide the input to train McDonough's neural network to the words and actions.

48.   Claim 26 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 26 is set forth including the limitations of claim 23 and with additional limitations similar to limitations set forth in claims 13 and 20. McDonough and Epstein describe and make obvious the limitations as indicated there.

49.   Claim 27 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 27 is set forth including the limitations of claim 23 and with additional limitations similar to limitations set forth in claims 14 and 21. McDonough and Epstein describe and make obvious the limitations as indicated there.

50.   Claim 51 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3) , and reproduced here:

    Claim 51 is set forth with limitations similar to limitations set forth in claim 17.

McDonough describes the limitations as indicated there. McDonough [at column 5, lines 45-46]

also describes a processor for accomplishing the claimed functionality.

    McDonough, however, does not explicitly describe that the speech event frequency

detector is computer-implemented and with computer-readable contents.

    Epstein [at column 8, lines 23-34] also describes processing a voice message as the

embodiment for stored audio data. Epstein describes:

    a computer readable medium whose contents cause the computer to perform the procedure

[at column 4, lines 4-30, as associated memory for software implemented on a computer to

accomplish the functionality].

    To the extent that McDonough's system does not necessarily contain typical computer

hardware and software, it would have been obvious to one of ordinary skill in the art of

implementing functional descriptions of operations at the time of invention to include Epstein's

concept of computer implementations by software loaded in computer-readable memory to

achieve McDonough's speech processing functionality because that would have provided the best

implementation under particular circumstances identified and evaluated by a skilled artisan. For

example, it is within the ordinary skill of an artisan to determine that software elements, such as

Epstein's concept, benefits changing processing functions or adding other processing functions

because software elements are more easily modified than hardware elements.

51.   Claim 52 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3) , and reproduced here:

Claim 52 is set forth with limitations similar to limitations set forth in claim 23 and with

additional limitations similar to limitations set forth in claim 51. McDonough and Epstein

describe and make obvious the limitations as indicated there.

McDonough and Furui and Epstein

52.   Claims 3, 12, 19, 25, 31, 33-34, 38, 42, 45, and 53-54 are rejected under 35 U.S.C. 103(a)

as being unpatentable over McDonough et al. [US Patent 5,625,748] in view of Sadaoki Furui,

"Digital Speech Processing, Synthesis, and Recognition," Marcel Dekker, Inc., New York, 1989,

pp. 225-289 and further in view of Epstein et al. [US Patent 6,327,343], all already of record.

53.   Claim 3 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3), and reproduced here:

Claim 3 is set forth including the limitations of claims 1-2. McDonough and Furui

describe and make obvious those limitations as indicated there. McDonough [at column 11, lines

9-11] also describes implementing algorithms in the C programming language for computing.

McDonough and Furui, however, do not explicitly describe digital conversion of analog

signals.

Epstein [at column 8, lines 23-34] also describes processing a voice message as the

embodiment for stored audio data. Epstein describes:

a voice message [at column 8, lines 33-35, as stored audio data];

converting the analog voice message from analog to digital [at column 7, lines 1-5, as

convert the analog data, such as an analog recorder, into digital data]; and

processing the digitized voice message [at column 9, lines 40-67, as convert voice data].

To the extent that McDonough's data is not innately digitized for the suggested computer

algorithms, it would have been obvious to one of ordinary skill in the art of speech processing at

the time of invention to include Epstein's analog to digital conversion for McDonough's data or

Furui's data because the digital data could be processed on general purpose digital computers or programmable digital signal processors.

For the digital data then, Furui describes:

processing the voice message into phonemes [at page 244, lines 8-28, as short periods of input speech with phoneme-template structure are compared to phoneme reference templates to represent each word by concatenation of phonemes]; and

comparing the phonemes from the voice message with stored voice representations [at page 244, lines 42-44, as match the same phoneme positions between the input speech and reference templates].

54.   Claim 12 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 12 is set forth including the limitations of claims 10-11 and with additional limitations similar to limitations set forth in claim 3. McDonough, Furui, and Epstein describe and make obvious the limitations as indicated there.

55.   Claim 19 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 19 is set forth including the limitations of claims 17-18 and with additional limitations similar to limitations set forth in claim 3. McDonough, Furui, and Epstein describe and make obvious the limitations as indicated there. Epstein also describes further limitations as follows:

an analog to digital converter [at column 7, lines 1-5, as an analog-to-digital converter].

56.   Claim 25 is rejected using the same rationale as in the previous Office action (mailed November 20, 2002 as paper 3), and reproduced here:

Claim 25 is set forth including the limitations of claims 23-24 and with additional

limitations similar to limitations set forth in claim 12. McDonough, Furui, and Epstein describe

and make obvious the limitations as indicated there. Epstein also describes further limitations as

follows:

an analog to digital converter [at column 7, lines 1-5, as an analog-to-digital converter].

57.   Claim 31 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3), and reproduced here:

Claim 31 is set forth including the limitations of claim 30 and with additional limitations

similar to limitations set forth in claim 3. McDonough, Furui, and Epstein describe and make

obvious the limitations as indicated there.

58.   Claims 33 and 34 are set forth including the limitations of claim 30 and with additional

limitations similar to limitations set forth in claims 6 and 7. Neither McDonough nor Furui

explicitly describes the additional limitations of claims 6 and 7; however, McDonough, Furui, and

Epstein describe and make obvious the limitations as indicated there.

59.   Claim 38 is rejected using the same rationale as in the previous Office action (mailed

November 20, 2002 as paper 3), and reproduced here:

Claim 38 is set forth including the limitations of claim 37 and with additional limitations

similar to limitations set forth in claim 12. McDonough, Furui, and Epstein describe and make

obvious the limitations as indicated there.

60.   Claim 42 is set forth including the limitations of claim 41 and with additional limitations

similar to limitations set forth in claim 21. Neither McDonough nor Furui explicitly describes the

additional limitations of claim 21; however, <u>McDonough</u>, <u>Furui</u>, and <u>Epstein</u> describe and make obvious the limitations as indicated there.

61.   Claim 45 is set forth including the limitations of claim 44 and with additional limitations similar to limitations set forth in claim 27. Neither <u>McDonough</u> nor <u>Furui</u> explicitly describes the additional limitations of claim 27; however, <u>McDonough</u>, <u>Furui</u>, and <u>Epstein</u> describe and make obvious the limitations as indicated there.

62.   Claim 53 is set forth with limitations similar to limitations set forth in claim 30 and with additional limitations similar to limitations set forth in claim 51. Neither <u>McDonough</u> nor <u>Furui</u> explicitly describes the additional limitations of claim 51; however, <u>McDonough</u>, <u>Furui</u>, and <u>Epstein</u> describe and make obvious the limitations as indicated there.

63.   Claim 54 is set forth with limitations similar to limitations set forth in claim 37 and with additional limitations similar to limitations set forth in claim 51. Neither <u>McDonough</u> nor <u>Furui</u> explicitly describes the additional limitations of claim 51; however, <u>McDonough</u>, <u>Furui</u>, and <u>Epstein</u> describe and make obvious the limitations as indicated there.

Response to Arguments

64.   The Applicant's arguments and changes in AMENDMENT AND RESPONSE TO OFFICE ACTION, filed February 25, 2003 (paper 4) in response to the previous Office action, mailed November 20, 2002 (paper 3), were fully considered, and the following results may also be found in the prior Office action, mailed March 19, 2003.

65.   With respect to objection to those claims needing clarification, the changes entered by

amendment provide clear descriptions of the claimed subject matter that was object to previously.

Accordingly, the previous objections are removed. Please see new grounds of objection.

66.   With respect to rejection of independent claims 1, 10, 17, 23, 47, and 48 under *35 USC*

§ 102, citing McDonough, the Applicant's arguments appear to be as follows:

a.   The Applicant's argument appears to be that McDonough's classification into

topics is the end of McDonough's interest in the communication. In particular, classification as to

topic is not performance of an action and no other action is taken. This argument is not persuasive

because McDonough [at column 2, lines 1-5] describes performing the actions at various nodes of

a neural network corresponding to identified words, for example routing. McDonough [at

column 12, lines 28-42] describes sorting, indexing, and routing based on the identified topic.

b.   The Applicant's argument appears to be that McDonough does not describe scores

associated with the voice representations, a total score associated with the message, and

performing actions based on the total score. This argument is not persuasive because McDonough

[at column 6, lines 41-42] describes scores associated with the speech events. One way in which

McDonough [at column 7, lines 26-44] scores the message is by summing confidence scores of

occurrences of words and phrases. The way in which McDonough [at column 12, lines 28-42]

bases taking an action on the score of the message is by determining the topic that the score

indicates for the message.

The Applicant's arguments have been fully considered but they are not persuasive.

Accordingly, the rejections are maintained.

67.   With respect to rejection of independent claims 30, 37, 41, 44, 49, 50, and 53-54 under *35*

USC § 102 and *§ 103*, citing McDonough alone and in combination with Epstein, the changes

entered by amendment include the predetermined pattern representing tone of speech and/or

frequency of speech.

The references <u>McDonough</u> and <u>Epstein</u> do not describe or make obvious that limitation.

Accordingly, the rejections are removed. The Applicant's assertions with respect to <u>McDonough</u>

have been considered, but they are moot in view of the new claim element. Please see new

grounds of rejection applied to address the new claim element: the predetermined pattern

representing tone of speech and/or frequency of speech.

Conclusion

68.   Any response to this action may be mailed to:

Mail Stop Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(571) 273-8300, (for both formal communications intended for entry and for
informal or draft communications, but please label informal fax as "INFORMAL"
or "DRAFT")

Some patent correspondence and/or fees may be submitted using the Office's electronic
filing system (EFS). See the Office's Internet Web site for additional information, for
example http:// www. USPTO. gov/ ebc/ ebc_faqs. htm.

Some patent correspondence may delivered by hand or delivery services, other than the
USPS, addressed as follows and brought to U.S. Patent and Trademark Office, Customer
Service Window, **Mail Stop Amendment**, Randolph Building, 401 Dulany Street,
Alexandria, VA 22314

69.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Donald L. Storm, of Division 2626, whose telephone number is

(571) 272-7614. The examiner can normally be reached on weekdays between 7:00 AM and 3:30

PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see http://pair-direct.uspto.gov. If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DONALD L. STORM
PRIMARY PATENT EXAMINER

February 23, 2007